

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

(37 CFR 1.98(b))

ATTY. DOCKET NO.
02-40171-US

10/633,372

APPLICANT
Anguel Nikolov et al.

FILING DATE
August 1, 2003

GROUP
2872

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
cec	4,615,034	09/86	Von Gunten et al			
	4,638,669	01/87	Chou			
	4,650,289	03/87	Kuwahara			
	4,732,444	03/88	Papuchon et al			
	4,763,972	08/88	Papuchon et al			
	4,778,234	10/88	Papuchon et al			
	4,998,793	03/91	Henry et al			
	5,077,816	12/91	Glomb et al			
	5,088,105	02/92	Scifres et al			
	5,091,981	02/92	Cunningham			
	5,283,845	02/94	Ip			
	5,299,212	03/94	Koch et al			
	5,461,246	10/95	Chou			
	5,467,415	11/95	Presby			
	5,617,234	04/97	Koga et al			
	5,654,818	08/97	Yao			
	5,691,989	11/97	Rakuljic et al			
	5,706,301	01/98	Lagerstrom			
	5,719,976	02/98	Henry et al			
	5,726,805	03/98	Kaushik et al			
	5,772,905	06/98	Chou			
	5,777,793	07/98	Little et al			
	5,793,784	08/98	Wagshul et al			
cec	5,820,769	10/98	Chou			

EXAMINER

Draugh H. Curtis

DATE CONSIDERED

23 Sept. '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

(37 CFR 1.98(b))

ATTY. DOCKET NO.

SERIAL NO.

APPLICANT

FILING DATE

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
OTEC	5,848,080	12/98	Dahm			
	5,852,688	12/98	Brinkman et al			
	5,870,421	02/99	Dahm			
	5,956,216	09/99	Chou			
	5,966,483	10/99	Chowdhury			
	5,973,316	10/99	Ebbesen et al			
	5,973,784	10/99	Szwaykowski et al			
	6,035,089	03/00	Grann et al			
	6,037,644	03/00	Daghighian et al			
	6,040,936	03/00	Kim et al			
	6,052,238	04/00	Ebbesen et al			
	6,064,506	05/00	Koors			
	6,069,380	05/00	Chou et al			
	6,075,915	06/00	Koops et al			
	6,101,300	08/00	Fan et al			
	6,122,103	09/00	Perkins et al			
	6,122,301	09/00	Tei et al			
	6,125,220	09/00	Copner et al			
	6,130,969	10/00	Villeneuve et al			
	6,137,939	10/00	Lesesky et al			
	6,154,318	11/00	Austin et al			
	6,154,479	11/00	Yoshikawa et al			
	6,169,825	01/01	Morey et al			
OTEC	6,175,667	01/01	Wang et al			

EXAMINER90

Orwig H. Curtis

DATE CONSIDERED

23 Sept '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

(37 CFR 1.98(b))

ATTY. DOCKET NO.

SERIAL NO.

APPLICANT

FILING DATE

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
CEC	6,191,890	02/01	Baets et al			
	6,198,557	03/01	Dultz et al			
	6,198,860	03/01	Johnson et al			
	6,208,463	03/01	Hansen et al			
	6,215,928	04/01	Friesem et al			
	6,233,375	05/01	Lang et al			
	6,233,380	05/01	Ferrieu			
	6,235,141	05/01	Feldman et al			
	6,240,109	05/01	Shieh			
	6,251,297	06/01	Komuro et al			
	6,252,709	06/01	Sato			
	6,253,009	06/01	Lestra et al			
	6,260,388	07/01	Borrelli et al			
	6,262,002	07/01	Carey			
	6,263,002	07/01	Hsu et al			
	6,275,291	08/01	Abraham et al			
	6,285,810	09/01	Fincato et al			
	6,288,840	09/01	Perkins et al			
	6,309,580	10/01	Chou			
	6,317,554	11/01	Kosaka et al			
	6,324,192	11/01	Tayebati			
	6,339,603	01/02	Flanders et al			
	6,349,103	02/02	Chung et al			
CEC	6,353,623	03/02	Munks et al			

EXAMINER

Craig H. Curtis

DATE CONSIDERED

23 Sept. '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

(37 CFR 1.98(b))

ATTY. DOCKET NO.

SERIAL NO.

APPLICANT

FILING DATE

GROUP

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

Gel		Austin, M., et al., "Fabrication for nanocontacts for molecular devices using nanoimprint lithography," J. Vac. Sci. Technol. B 20(2), Mar/Apr 2002, pp. 665-667
		Austin, M., et al., "Fabrication of 70 nm channel length polymer organic thin-film transistors using nanoimprint lithography," Appl. Phys. Lett. 81 (23), December 2, 2002, pp. 4431-4433
		Bird, G.R. et al., "The Wire Grid as a Near-Infrared Polarizer," J. of the Optical Soc. of America, 50 (9), 886-890, (1960)
		Born, Max, and Wolf, Emil: Principles of Optics: Electromagnetic Theory of Propagation, Interference and Diffraction of Light" 7th ed. Oct. 1 1999. Cambridge University Press. p. 790.
		Brundrett, D. L., et al., "Normal-incidence guided-mode resonant grating filters: design and experimental demonstration" Optics Lett., 1998 May 1;23(9):700-702.
		Cao, H., et al., "Fabrication of 10 nm enclosed nanofluidic channels," Appl. Phys. Lett. 81 (1), July 1, 2002, pp. 174-176\
		Cao, H., et al., "Gradient Nanostructures for interfacing microfluidics and nanofluidics," Appl. Phys. Lett. 81(16), October 14, 2002, pp. 3058-3060
		Chang, Allan S. P., et al. "A new two-dimensional subwavelength resonant grating filter fabricated by nanoimprint lithography" Department of Electrical Engineering, NanoStructures Laboratory, Princeton University.
		Chigrin, D. N., et al., "Observation of total omnidirectional reflection from a one-dimensional dielectric lattice" Appl. Phys. A. 1999;68:25-28.
		Chou, S. Y., et al., "Subwavelength transmission gratings and their applications in VCSELs" Proc. SPIE. 1997;3290:73-81.
		Chou, S. Y., et al., "Observation of Electron Velocity Overshoot in Sub-100-nm-channel MOSFET's in Silicon," IEEE Electron Device Letters, Vol. EDL-6, No. 12, December 1985, pp. 665-667
		Chou, S.Y., et al., "Imprint Lithography with 25-Nanometer Resolution" 1996 April 5;272(5258):85-87.
		Chou, S.Y., et al., "Sub-10 nm imprint lithography and applications" J. Vac. Sci. Technol. B. 1997 Nov/Dec;15(6):2897-2904.
		Chou, S., et al., "Imprint of sub-25 nm vias and trenches in polymers," Appl. Phys., Lett. 67 (21), Nov. 20, 1995, pp. 3114-3116
		Chou, S., et al., "Lateral Resonant Tunneling Transistors Employing Field-Induced Quantum Wells and Barriers," Proceedings of the IEEE, Vol. 79, No. 8, August 1991, pp. 1131-1139
Chou		Chou, S., et al., "Nanoscale Tera-Hertz Metal-Semiconductor-Metal Photodetectors," IEEE Journal of Quantum Electronics, Vol. 28, No. 10, October 1992, pp. 2358-2368

EXAMINER

Braig H. Curtis

DATE CONSIDERED

23 sept. '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (MODIFIED) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) (37 CFR 1.98(b))	ATTY. DOCKET NO.	SERIAL NO.
	APPLICANT	
	FILING DATE	GROUP

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

aec		Chou, S., et al., "Ultrafast and direct imprint of nanostructures in silicon," Nature, Vol. 417, June 20, 2002, pp. 835-837
		Chou, S., G.A., "Patterned Magnetic Nanostructures and Quantized Magnetic Disks," Proceedings of the IEEE, Vol. 85, No. 4, April 1997, pp. 652-671
		Cui, B., et al., "Perpendicular quantized magnetic disks with 45 Gbits on a 4 x 2 cm ² area," Journal of Applied Physics, Vol. 85, No. 8, April 15, 1999, pp. 5534-5536
		Deshpande, P., et al., "Lithographically induced self-assembly of microstructures with a liquid-filled gap between the mask and polymer surface," J. Vac. Sci. Technol. B 19(6), Nov/Dec 2001, pp. 2741-2744
		Deshpande, P., et al., "Observation of dynamic behavior lithographically induced self-assembly of supramolecular periodic pillar arrays in a homopolymer film," Appl. Phys. Lett. 79 (11), September 10, 2001, pp. 1688-1690
		Fan, S., et al., "Design of three-dimensional photonic crystals at submicron lengthscales" Appl. Phys. Lett. 1994 Sept. 12;65(11):1466-1468.
		Feiertag, G., et al., "Fabrication of photonic crystals by deep x-ray lithography" Appl. Phys. Lett., 1997 Sept. 15;71(11):1441-1443.
		Fink, Y., et al., "Guiding optical light in air using an all-dielectric structure" J. Lightwave Techn. 1999 Nov.;17(11):2039-2041.
		Fink, Y., et al., "A dielectric omnidirectional reflector" Science. 1998 Nov. 27;282:1679-1682.
		Fischer, P.B., et al., "10 nm electron beam lithography and sub-50 nm overlay using a modified scanning electron microscope," Appl. Phys. Lett. 62 (23), June 7, 1993, pp. 2989-2991
		Flanders, D.C., "Submicrometer periodicity gratings as artificial anisotropic dielectrics," Appl. Phys. Lett. 42 (6), 492-494 (1983)
		Gabathuler, W., et al., "Electro-nanomechanically wavelength-tunable integrated-optical bragg reflectors Part II: Stable device operation" Optics Communications. 1998 Jan 1;145:258-264.
		Gaylord, Thomas K., et al., "Analysis and applications of optical diffraction by gratings," Proc. IEEE. 1985 May;73(5):894-937.
		Goeman, S., et al., "First demonstration of highly reflective and highly polarization selective diffraction gratings (GIRO-Gratings) for long-wavelength VCSEL's" IEEE Photon. Technol. Lett. 1998 Sept.;10(9):1205-1207.
		Hayakawa, Tomokazu, et al., "ARROW-B Type Polarization Splitter with Asymmetric Y-Branch Fabricated by a Self-Alignment Process," J. Lightwave Techn. 15(7), 1165-1170, (1997).
		Hereth, R., et al., "Broad-band optical directional couplers and polarization splitter," J. Lightwave Techn., 7(6), 925-930, (1989).
		Ho, K.M., et al., "Existence of a photonic gap in periodic dielectric structures" 1990 Dec. 17;65(25):3152-3155.
		Ibanescu, M., et al., "An all-dielectric coaxial waveguide" Science. 2000 July 21;289:415-419.
Cec		Joannopoulos, J.D., et al., "Photonic crystals: putting a new twist on light" Nature. 1997 March 13(6621):143-149.

EXAMINER

Craig H. Curtis

DATE CONSIDERED

23 sept. '04

EXAMINER: Initial date considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (MODIFIED) PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.	SERIAL NO.
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) (37 CFR 1.98(b))	APPLICANT	
	FILING DATE	GROUP

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

Ctec		Kokubun, Y., et al, "ARROW-Type Polarizer Utilizing Form Birefringence in Multilayer First Cladding," IEEE Photon. Techn. Lett., 11(9), 1418-1420, (1993).
		Kuksenkov, D. V., et al., "Polarization related properties of vertical-cavity surface-emitting lasers" IEEE J. of Selected Topics in Quantum Electronics. 1997 April;3(2):390-395.
		Levi, B.G., "Visible progress made in three-dimensional photonic 'crystals'" Physics Today. January 1999;52(1):17-19.
		Li, M., et al., "Direct three-dimensional patterning using nanoimprint lithography," Appl. Phys. Lett. 78 (21), May 21, 2001, pp. 3322-3324
		Li, M., et al., "Fabrication of circular optical structures with a 20 nm minimum feature using nanoimprint lithography," Appl. Phys. Lett. 76 (6), February 7, 2000, pp. 673-675
		Magel, G.A., "Integrated optic devices using micromachined metal membranes" SPIE. 1996 Jan.;2686:54-63.
		Magnusson, R., et al., "New principle for optical filters" Appl. Phys. Lett. 1992 Aug. 31;61(9):1022-1023.
		Mashev, L., et al., "Zero order anomaly of dielectric coated gratings" Optics Communications. 1985 Oct. 15; 55(6):377-380.
		Moharam, M. G., et al., "Rigorous coupled-wave analysis of planar-grating diffraction" J. Opt. Soc. Am. 1981 July;71(7):811-818.
		Mukaihara, T., et al., "Engineered polarization control of GaAs/AlGaAs surface emitting lasers by anisotropic stress from elliptical etched substrate hole" IEEE Photon. Technol. Lett. 1993 Feb.;5(2):133-135.
		Noda, S., et al., "New realization method for three-dimensional photonic crystal in optical wavelength region" Jpn. J. Appl. Phys. 1996 July 15;35:L909-L912.
Ctec		Rokhinson, L.P., et al., "Double-dot charge transport in Si single-electron/hole transistors," Appl. Phys. Lett. 76 (12), March 20, 2000, pp. 1591-1593

EXAMINER

Braigle. Curtis

DATE CONSIDERED

23 Sept. '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

(37 CFR 1.98(b))

ATTY. DOCKET NO.

SERIAL NO.

APPLICANT

FILING DATE

GROUP

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

CSEC		Rokhinson, L.P., et al., "Kondo-like zero-bias anomaly in electronic transport through an ultrasmall Si quantum dot," Physical Review B, Vol. 60, No. 24, December 15, 1999, pp. 319-321
		Rokhinson, L.P., et al., "Magnetically Induced Reconstruction of the Ground State in a Few-Electron Si Quantum Dot," Physical Review Letters, Vol. 87, No. 16, October 15, 2001, pp. 1-3
		Rudin, A., et al., "Charge-ring model for the charge-induced confinement enhancement in stacked quantum-dot transistors," Appl. Phys. Lett. 73 (23), December 7, 1998, pp. 3429-3431
		Russell, P. St. J., et al., "Full photonic bandgaps and spontaneous emission control in 1D multilayer dielectric structures" Opt. Commun. 1999 Feb. 1;160:66-71.
		Rytov, S. M., "Electromagnetic properties of a finely stratified medium" Soviet Physics JETP (Journal of Experimental & Theoretical Physics). 1956 May;2(1):466-475.
		Schablitsky, S., et al., "Controlling polarization of vertical-cavity surface-emitting lasers using amorphous silicon subwavelength transmission gratings," Appl. Phys. Lett. 69 (1), July 1, 1996, pp. 7-9
		Sharon, A., et al., "Narrow spectral bandwidths with grating waveguide structures" Appl. Phys. Lett. 1996 Dec. 30;69(27):4154-4156.
		Sugimoto, Y., et al., "Experimental verification of guided modes in 60 degrees - bent defect waveguides in AlGaAs-based air-bridge-type two-dimensional photonic crystal slabs" J. Appl. Phys. 2002 March 1;91(5):3477-3479.
		Sun, X., et al., "Multilayer resist methods for nanoimprint lithography on nonflat surfaces" J. Vac. Sci. Technol. B. 1998 Nov/Dec;16(6):3922-3925.
		Tibuleac, S., et al., "Reflection and transmission guided-mode resonance filters" J. Opt. Soc. Am. A. 1997 July;14(7):1617-1626.
		Trutschel, U., et al., "Polarization splitter based on anti-resonant reflecting optical waveguides," J Lightwave Techn., 13(2), 239-243, (1995).
		Tyan, R.C., et al., "Design, fabrication and characterization of form-birefringent multilayer polarizing beam splitter" J. Opt. Soc. Am. A. 1997 July;14(7):1627-1636.
		Tyan, R. et al., "Polarizing beam splitters constructed of form-birefringent multilayer gratings," SPIE 2689, 82-89,
		van Blaaderen, Alfons, "Opals in a New Light" Science. 1998 Oct. 30; 282(5390):887-888.
		van Doorn, A. K. Jansen, et al., "Strain-induced birefringence in vertical-cavity semiconductor lasers" IEEE J. Quantum Electronics. 1998 April;34(4):700-706.
		Vellekoop, A.R. et al., "A small-size polarization splitter based on a planar phase optical phased array," J Lightwave Techn., 8(1), 118-124, (1990).
		Wang, J., et al., "Molecular alignment in submicron patterned polymer matrix using nano-imprint lithography," Appl. Phys. Lett. 77 (2), July 10, 2000, pp. 166-168
CSEC		Wang, J., et al., "Fabrication of a new broadband waveguide polarizer with a double-layer 190 nm period metal-gratings using nanoimprint lithography" J. Vac. Sci. Technol. B. 1999 Nov/Dec;17(6):2957-2960.

EXAMINER

Orange L. Curtis

DATE CONSIDERED

23 Sept '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

(37 CFR 1.98(b))

ATTY. DOCKET NO.

SERIAL NO.

APPLICANT

FILING DATE

GROUP

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

che		Wang, S. S., et al., "Design of waveguide-grating filters with symmetrical line shapes and low sidebands" Opt. Lett. 1994 June 15;19(12):919-921.
		Wang, S. S., et al., "Guided-mode resonances in planar dielectric-layer diffraction gratings" J. Opt. Soc. Am. A. 1990 Aug.;7(8):1470-1475.
		Weber, M. F., Stover, C.A., Gilbert, L.R., Nevitt, T.J., Ouder Kirk, A.J. "Giant birefringent optics in multilayer polymer mirrors," Science, 287, 2451-2456, March 31, 2000.
		Winn, J. N., et al., "Omnidirectional reflection from a one-dimensional photonic crystal" Opt. Lett. 1998 Oct. 15;23(20):1573-1575.
		Wu, L., et al., "Dynamic modeling and scaling of nanostructure formation in the lithographically induced self-assembly and self-construction" Appl. Phys. Lett. 2003 May 12;82(19):3200-3202.
		Yablonovitch, E., "Inhibited spontaneous emission in solid-state physics and electronics" Phys. Rev. Lett. 1987 May 18;58(20):2059-2062.
		Yablonovitch, E., et al., "Photonic band structure: The face-centered-cubic case employing nonspherical atoms" Phys. Rev. Lett. 1991 Oct. 21;67(17):2295-2298.
		Yanagawa, H., et al., "High extinction guided-wave optical polarization splitter," IEEE Photon. Techn. Lett., 3(1), 17-18, (1991).
		Yoshikawa, T., et al., "Polarization-controlled single-mode VCSEL" IEEE J. Quantum Electronics. 1998 June;34(6):1009-1015.
		Yu, Z., et al., "Reflective polarizer based on a stacked double-layer subwavelength metal grating structure fabricated using nanoimprint lithography," Appl. Phys. Lett. 77 (7), August 14, 2000, pp. 927-929
		Zakhidov, A.A., et al., "Carbon structures with three-dimensional periodicity at optical wavelengths" Science. 1998 Oct 30;282(5390):897-901.
che		

EXAMINER

Braigh. Carter

DATE CONSIDERED

23 Sept. '04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.